

APPENDIX 3.2.3.

PORCINE SEMEN

Article 3.2.3.1.

General considerations

The purposes of official sanitary control of semen production are to:

1. maintain the health of animals on an *artificial insemination centre* at a level which permits the international distribution of semen having negligible risk of infecting other animals or humans with specific pathogenic organisms that can be transmitted by semen; international trade in porcine semen is mainly based on fresh preserved semen, and special consideration should, therefore, be taken into account regarding the animal health status of donor animals;
2. ensure that semen is hygienically collected, processed and stored.

The disease position in one country generally differs from that in another, thus prophylactic programmes vary widely in the range of organisms for which donor boars are tested before admission to an *artificial insemination centre*, before entering in quarantine, while in quarantine, and periodically after full admission into the stud.

Article 3.2.3.2.

Conditions applicable to artificial insemination centres

1. The *artificial insemination centre* is comprised of:
 - a) a boar accommodation and a semen collection area, together defined here on as semen collection facilities;
 - b) a semen laboratory and semen storage areas;
 - c) administration facilities.

All boars entering into the semen collection facilities should have passed through an adequate quarantine process.

2. The centre should be officially approved by the *Veterinary Administration*.
3. The centre should be under the supervision and control of the *Veterinary Authority* which will be responsible for regular audits, at an interval of no more than 6 months, of protocols, procedures and prescribed records on the health and welfare of the boars in the centre and on the hygienic production, storage and dispatch of semen. Written reports of the official audit should be kept at the *artificial insemination centre*.
4. The centre should be under the direct supervision and control of a veterinarian designated by the *artificial insemination centre* and accredited by the *Veterinary Administration*.

Article 3.2.3.3.

Conditions applicable to animal accommodation and semen collection facilities

1. The semen collection facilities should include distinct areas for accommodating fully health tested resident boars, semen collection, feed storage, manure storage, and isolation of suspect boars.
2. Only porcine associated with semen production (including sentinel pigs) should be permitted to enter the semen collection facilities.
3. Porcine present in the semen collection facilities should be adequately isolated to prevent the transmission of diseases from farm livestock and other animals. Measures should be in place to prevent the entry of wild animals.
4. Personnel at the centre should be technically competent and observe high standards of personal hygiene to preclude the introduction of pathogenic organisms. Special protective clothing and footwear for use only at the semen collection facilities should be provided and worn at all times inside.
5. Visitors to the semen collection facilities should be kept to a minimum and visits should be subject to formal authorisation and control. Authorised visitors must be required to comply with the conditions laid down by the accredited veterinarian. A logbook for the registration of all visitors is required. Equipment for use with livestock dedicated to the semen collection facilities should be disinfected prior to entry.
6. All vehicles used for transport should be cleaned and disinfected prior to every transport. [Vehicles transporting animals into the semen collection facilities should be used exclusively for this purpose.]
7. The boar accommodation and semen collection areas should be thoroughly cleansed at least once a year. The premises should be treated against rodents and insects on a regular basis as needed to control these pests.
8. Fodder introduction and manure removal should be done in a manner which poses no significant animal health risk.

Article 3.2.3.4.

Conditions applicable to semen laboratories

1. The semen laboratory should be physically separated from the semen collection facilities. Entry to the laboratory should be prohibited to unauthorised personnel.
2. The laboratory personnel should be technically competent and observe high standards of personal hygiene to preclude the introduction of pathogenic organisms during semen evaluation, processing and storage. Special protective clothing and footwear for use only inside the laboratory should be provided and worn at all times.
3. Visitors to the laboratory should be kept to a minimum and visits should be subject to formal authorisation and control. Authorised visitors must be required to comply with the conditions

laid down by the accredited veterinarian. Visitors should wear protective clothing and footwear for use only inside the laboratory should be provided and worn at all times. A logbook for the registration of all visitors is required. All equipment and tools brought on to the premises must be treated to ensure that they cannot introduce disease.

4. The laboratory should be constructed with materials that permit effective cleaning and *disinfection*.
5. The laboratory should be regularly cleaned. Work surfaces for semen evaluation and processing should be cleaned and disinfected at the end of each workday.
6. The laboratory should be treated against rodents and insects on a regular basis as needed to control these pests.
7. The storage and dispatch room should be easy to clean and disinfect.
8. No [return of] semen, diluent or other products used in the field should be allowed to return. Semen containers (if not for single use) are properly cleaned and disinfected before re-entering the *artificial insemination centre*. When relevant, liquid nitrogen containers should be properly cleaned and disinfected before entering the *artificial insemination centre*. To store the frozen semen, only liquid nitrogen not used before in the preservation of animal products should be used in this case.
9. Only semen collected from donors having a health status equivalent to or better than the donors at the semen collection facilities should be processed in the laboratory.

Article 3.2.3.5.

Conditions applicable to testing of boars

Boars can enter an *artificial insemination centre* only if they fulfil the requirements laid down by the *Veterinary Administration*.

1. Pre-quarantine testing

Boars must appear healthy and normal and must comply with the following requirements prior to entry into the *quarantine station*:

- a) The boars should originate from zones free from bovine tuberculosis and brucellosis (*Brucella abortus*, *B. suis*), or pre-entry testing is required with negative results according to tests referred to in the *Manual*.
- b) The boars should originate from zones free from foot and mouth disease, classical swine fever, African swine fever, swine vesicular disease and vesicular stomatitis, or pre-entry testing is required with negative results according to tests referred to in the *Manual*.
- c) The animals should originate from zones free from Aujeszky's disease, enterovirus encephalomyelitis and transmissible gastroenteritis, or pre-entry testing is required with negative results according to tests referred to in the *Manual*.

2. Quarantine testing or treatment

Prior to entering the semen collection facilities of the *artificial insemination centre*, the boars must be kept in a *quarantine station* for at least 28 days. The animals should be subjected to diagnostic

tests or treatments as described below after a minimum of 21 days after entering the *quarantine station*.

- a) The boars should originate from zones free from brucellosis (*B. abortus*, *B. suis*); if not, the boars should be subjected to tests as referred to in the *Manual* with negative results.

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- b) The boars should originate from zones free from foot and mouth disease, classical swine fever, African swine fever, swine vesicular disease and vesicular stomatitis; if not, the boars should be subjected to tests as referred to in the *Manual* with negative results.
- c) The boars should originate from zones free from Aujeszky's disease and pathogenic enterovirus encephalomyelitis; if not, the boars should be subjected to tests as referred to in the *Manual* with negative results.
- d) With regard to leptospirosis, all boars should be treated with [25 mg dihydrostreptomycin per kg of live body weight injected twice at an interval of 14 days or an equivalent treatment] an effective antimicrobial compound.

3. Testing programme for porcine resident in the semen collection facilities

All boars resident at the semen collection facilities should be tested annually with negative results in non free zones for the following diseases:

- [a] brucellosis;
- [b] foot and mouth disease, classical swine fever, African swine fever, swine vesicular disease, vesicular stomatitis and pathogenic enterovirus encephalomyelitis;
- [c] Aujeszky's disease.

Article 3.2.3.6.

Conditions applicable to the preparation of diluents and the hygienic handling and processing of semen

1. Whenever milk, egg yolk, or any other animal product is used in preparing the semen diluent, the product must be free of pathogens or sterilised (milk heat treated at 92°C for 3-5 minutes; eggs derived from SPF flocks or equivalent).
2. The inclusion of broad spectrum antibiotics is required. The names of the antibiotics added and their concentration should be stated in the *international veterinary certificate*.
3. Semen from boars should be processed and packed individually.
4. All implements that come into contact with the semen during collection and processing should be for single use or properly disinfected or sterilised prior to use for every individual ejaculate.
5. All elements used to prepare the diluent should be submitted to adequate quality controls.
6. Eating is allowed only in separated and designated areas. No food that is at risk for the health status of the boars present at the semen collection facilities and the produced semen is allowed at the premises.

Article 3.2.3.7.

Conditions applicable to the packing and storage of semen

1. Fresh semen doses for export should be packed in transport boxes for single use.
 2. Frozen semen for export should be stored in fresh liquid nitrogen in sterilised flasks.
 3. All individual semen doses should be marked in such a way that one can trace the insemination doses back to the donor boar and collection date.
 4. Containers should be sealed with an official numbered seal under the responsibility of the *Veterinary Administration* before export and accompanied by an *international veterinary certificate* listing the contents.
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